

ABSTRACT OF THE DISCLOSURE

Embodiments of the invention provide methods for determining the characteristics of a local loop using the multi-carrier tones of a DSL activation process. For one embodiment, one or more sets of downstream multi-carrier tones of a digital subscriber line activation process are received at an extended voice-band modem and are capable of transmitting upstream multi-carrier tones of the digital subscriber line activation process over a local loop. The downstream carrier tones and the upstream carrier tones are folded into a first multi-tone signal and a second multi-tone signal, respectively, each having a plurality of component signals within the spectrum band of the extended voice-based modem. The total signal power of the first multi-tone signal is divided by the power of one of the plurality of component signals of the second multi-tone signal to determine a ratio value. The ratio value is used to determine a characteristic of the local loop.